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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,221	09/22/1999	GORKEM I. ATES	ATEG21A	4402

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09/10/2002

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EXAMINER

NGUYEN, HAI V

ART UNIT

PAPER NUMBER

2152

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/401,221

Applicant(s)

ATES, GORKEM I.

Examiner

Hai V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17, 24 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This Action is in response to the request for reconsideration received by 17 and 24 June 2002.
2. Claims 1-6 are presented for examination.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(a) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 3, 5, 6 are rejected under 35 U.S.C. 102(a) as being unpatentable by **Brendel et al. patent no. 5,774,660.**
5. As to claim 3, Brendel teaches wherein said top networking OSI is at least one of TCP, HTTP, and application level (Figs. 12, 13, 17).
6. As to claim 5, Brendel teaches wherein said step of making a request for information, over the Internet, by the client, from the main server includes making the request for at least one of a streaming video and audio, over the Internet, by the client, from the main server (col. 8, lines 63-67; col. 9, lines 1-16).
7. As to claim 6, Brendel teaches wherein said step of seeking the nearest at least one participant server, by said main server, so as to form an at least one nearest participant server includes seeking the nearest at least one nearest participant server, by said main server, so as to form said at least one nearest participant server that has

the most bandwidth and CPU and other serving requirements needed to furnish the requested information to the client (the load balancer 54 keeps track of which requests are being processed by each server in server farm 50, and attempts to balance the load of requests among the servers, col. 9, lines 30-32; the load balancer 70 determines that only server 52 and not servers 56, 51 can handle the request, col. 10, lines 54-59).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. Claim 2 is rejected under 35 U.S.C. 102(e) as being unpatentable by **Bell et al.** patent no. **5,923,854**.

10. As to claim 2, Bell teaches wherein said main server is a TCP/IP server and assigns jobs to said at least one participant server dynamically without relocating the client using neither HTTP nor HTML commands so as to take relocating process away from top networking OSI layers to 3rd level of Internet working OSI that is IP so as to enable starting downloading of the requested information from one of said at least one participant servers and finishing the downloading from another of said at least one participant server without ever noticing server alternation by virtue of said at least one participant server assigning to the requested information said IP address of said main server and not said IP address of said at least one participant server (col.5, lines 30-32; col. 6, lines 6-8, lines 41-43).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Brendel** et al. patent no. **5,774,660** in view of **Bell** et al. patent no. **5,923,854**.

13. As to claim 1, Brendel teaches the invention as claimed, including an Internet system, comprising:

a main server (Figs. 8, 19, server 56) for storing information to be requested over the Internet (Figs. 8, 19, Internet cloud 66) by a client (Figs. 8, 19, Client browser 10) so as to form a request for information and having an IP address; and

at least one participant server having an IP address (Figs. 8, 19, server 52) and electrically communicating with said main server; said at least one participant server not receiving the request for information from the client, but rather said main server receiving the request for information over the Internet from the client and requesting over the Internet that said at least one participant sever send the requested information over the Internet back to the client (the load balancer determines an assigned server in the plurality of network nodes to respond to the request from the client contained in an incoming data packet. The load balancer transfers a connection to the client to the assigned server, col. 6, lines 20-26; the assigned servers can also be located remotely from the load balancer, such as over a WAN using this technique (Brendel, col. 9, lines

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52-64; col. 10, lines 28-52; col. 11, lines 64-67; col. 12, lines 1-5; col. 17, lines 5-8; col. 20, lines 35-63); and servers in the web farm may be geographically remote, where some of the servers are located in one city while other servers are located in other cities. Load balancing may be performed not just based on content, but also geographically to minimize traffic on the network backbone (Brendel, col. 20, lines 35-47)), and if said at least one participant server does not have the requested information, the requested information is downloaded from said main server to said at least one participant server (the load balancer then sends the browser's ACK packet to the assigned server, and the assigned server is then connected directly to the browser, having the same TCP state as was established with the load balancer (Brendel, col. 12, lines 50-54); and Load balancer maintains a table or other data structure of all the locations of files in the web site which is used for load balancing. Software utilities may be used to replicate new files or delete all copies of old files. Access statistics of each file or directory of files can be kept to determine which files are more frequently used and should be replicated to more servers, and which files are infrequently used and only two copies should be kept (Brendel, col. 19, lines 15-34); and that packets assigned to another node's server must be sent over the media to the assigned server (Brendel, col. 16, lines 21-35; col. 19, lines 15-34)); However, Brendel does not teach explicitly when said at least one participant server sends the requested information over the Internet back to the client, said at least one participant server assigns to the requested information said IP address of said main server and not said IP address of said at least one participant server. Thus, the artisan would have been motivated to look to the

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related networking art for potential system for implementing the replacement of IP address of said at least one participant server by the IP address of said main server when outgoing the requested information over the Internet back to the client.

In the same field of endeavor, Bell discloses in an analogous art (e.g. the virtual IP address). Bell discloses each of said physical addresses is replaced with said virtual IP address in outgoing data blocks (Bell, col.5, lines 30-32; col. 6, lines 6-8, lines 41-43).

Accordingly, it would have been obvious to one of ordinary skill in the Data networking art at the time of the invention to combine the teachings of Brendel and Bell to use the main server's IP address on outgoing the requested information for the purpose of taking the advantage of reducing information network traffic and allowing the virtual interface and the virtual routes associated with it to remain "active" until an operator expressly deletes them (Bell, col. 2, lines 42-57). Bell also suggests that the virtual address is used as the outgoing source address in the messages sent from the host to other nodes, hence the virtual IP address is the only interface for the system (Bell, col. 2, lines 30-41). Brendel suggests that since the client received the virtual IP address as the source IP address in these packets, the client is unaware that the server is a different machine than the load-balancer, or other servers at the web site (Brendel, col. 13, lines 17-67; col. 14, lines 1-37).

14. Claim 4 is corresponding method of claim 1; therefore, it is rejected under the same rationale.

15. In the remarks, Applicant argued in substance that

(A) Prior art does not teach "...said main server... requesting over the Internet that said at least one participant server send the requested information over the Internet back to the client..." in claim 1.

As to the point (A), Brendel discloses that the load balancer then transfers the connection and the current TCP state to the assigned server, using TCP migration¹²⁰. TCP state migration is not simply forwarding packets through as they are received. In stead the packets received are stored by the load balancer and then played back to the assigned server. The assigned server accesses its local disk to read the requested file and sends a copy of the requested file to the browser through the Internet as data transfer 104 (Brendel, col. 9, lines 52-64; col. 10, lines 38-52; col. 11, lines 64-67; col. 12, lines 1-5; col. 20, lines 35-63).

(B) Prior art does not teach, "...if said at least one participant server does not have the requested information, the requested information is downloaded from the main server to said at least one participant server..." in claim 1.

As to point (B), Brendel discloses that packets assigned to another node's server must be sent over the media to the assigned server (Brendel, col. 16, lines 21-35; col. 19, lines 15-34).

(C) Prior art does not teach "requesting over the Internet, by said main server acting like an orchestra leader, that that said at least one participant server send the requested information over the Internet back to the client..." in claim 4.

As to point (C), Brendel discloses that the load balancer then transfers the connection and the current TCP state to the assigned server, using TCP migration¹²⁰. TCP state migration is not simply forwarding packets through as they are received. Instead the packets received are stored by the load balancer and then played back to the assigned server. The assigned server accesses its local disk to read the requested file and sends a copy of the requested file to the browser through the Internet as data transfer 104 (Brendel, col. 9, lines 52-64; col. 10, lines 38-52; col. 11, lines 64-67; col. 12, lines 1-5; col. 20, lines 35-63).

(D) Prior art does not teach, “downloading the requested information from said main server to said at least one participant server...” in claim 4.

As to point (D), Brendel discloses that packets assigned to another node’s server must be sent over the media to the assigned server (Brendel, col. 16, lines 21-35; col. 19, lines 15-34).

16. Application’s arguments filed on 06/17/2002 and 06/24/2002 have been fully considered but they are not deemed to be persuasive.

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 703-306-0276. The examiner can normally be reached on 7:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3230.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20131

or faxed to:

(703) 746-7239, (for **formal communications**; please mark
"EXPEDITE PROCEDURE").

or:

(703) 746-7240 (for **informal or draft communications**, please
label "PROPOSED " or "DRAFT").

Or:

(703) 746-7238 (for After Final communications).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA., Sixth Floor (Receptionist).



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Hai V. Nguyen
Examiner
Art Unit 2152

